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RESEARCH AND TECHNOLOGY RESUME				1. GOVT ACCESSION	2. AGENCY ACCESSION	3. REPORT NUMBER
4. DATE OF RESUME	5. WORDS OF RESUME	6. SECURITY	7. REGRADING	8. RELEASE LIMITATION	9. WORK OR PROJECT	
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10A. ELEMENT NUMBER/CODE				10B. PRIOR NUMBER/CODE		
62205012 HF1030801 AGJ				62205012 HF103080104		
(U) Shipboard Sonar Display						
11. SUBJECT AREA				12. START DATE	13. COM. DATE	14. COM. DATE
012800 Phys. Oceanography; 001800 ASW warfare; 000100 Acoustic detection				1263	0668	DN
15. PRELIM. METHOD	16. CONTRACT GRANT	17. DATE	18. RESOURCES EST.	19. PROJECT NO.	20. PERFORMING ORGANIZATION	
C. In-House	N/A		PRIORITY 65	30	250450 2105	
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27. EQUIP. IDENTIFICATION				28. EQUIP. IDENTIFICATION		
Information display						
29. KEYWORDS						
Sonar; sonar equation; velocimeters; computers; plotters						
(U) Objective. Develop a shipboard system for rapidly displaying environmental data for sonar operating decision criteria.						
() Approach. Reduce the sonar equation to an easily usable form and develop procedures for its applications to both historical and in-situ environmental data. Format environmental data and computational procedures on microfilm or video tape so that it can be rapidly and simply employed aboard ship to optimize sonar utilization. Using disposable velocimeters and shipboard receiving electronics, together with a shipboard computer and plotter, develop an optimum capability for determining sonar performance from stored and real-time environmental data. Display results on video tape or other appropriate system. Problems are anticipated in computerizing the models on board ship.						
(U) Progress. Since April 1964, progress has been made in reducing the environmental data and applicable sonar equations to an easily followed and readily understandable microfilm format. Computer programs for ray path and intensity calculations are being modified. A disposable sound speed profiling device has been developed and is being field tested.						
30. REFERENCES				31. REFERENCES		
GOR 22, 23, 37				AR		
32. EQUIP. IDENTIFICATION				33. EQUIP. IDENTIFICATION		
DN						
34. EQUIP. IDENTIFICATION				35. EQUIP. IDENTIFICATION		

NAME: EDITH H. HARRIS		U		A		62205012 HY1030801 AGJ	
PROJECT: 62205012		1263		E		67	
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52. (U) Future Efforts. a. Develop an interim technique, such as microfilm, for storing and displaying environmental information needed to define sonar operating criteria. b. Evolve sound intensity and ray path equations in simplest forms compatible with the range of oceanographic variables and with user requirements for accuracy and definition. c. Select or develop a combination portable computer (analog or digital) and automatic plotter of capacity sufficient to define and display required sound intensity and ray path information. d. Develop a method for providing stored and real-time oceanographic data to the computer. e. Conduct evaluation in conjunction with Fleet Sonar exercises.

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